**Southwest Fiberglass, LLC**
**Air Quality Permit # 205**

**Revision Technical Support Document**
August 2005

## I. General Comments:

### A. Company Information

1. Southwest Fiberglass, LLC
2. 4798 S. Julian Avenue, Tucson, AZ 85714

### B. Background

This source was issued a 5-year permit in February 2002 which was structured in anticipation of the soon to be released MACT (WWWW – Reinforced Plastic Composites Production, promulgated April 21, 2003). This revision adds the MACT rules and streamlines them with the existing 220 limits wherever possible. See discussion below in "D. Revision Approach." The source has two processes addressed by the permit: Reinforced Plastic Composites Production (RPCP) and Surface Coating Operations (SCO).

### C. Attainment Classification

This source is located in an area which is attainment for all pollutants.

### D. Revision Approach

The objective of this revision was to introduce all applicable regulations of WWWW into an existing permit without disturbing too much of the existing language. The revision was done this way because the Permittee did not seek to revise/ change the various synthetic minor limitations (SMLs) established in the original permit. Wherever possible, the existing standards were retained without change, as portions of the permit which have not been revised are not subject to Public/ EPA review.

In cases where the existing SML is more stringent than the MACT, the MACT standard and SML have been streamlined. For example, in II.A.3 – some applicable MACT standards that would have allowed HAP contents in excess of the SMLs previously established were streamlined in order to avoid confusion with the SML

In other cases, a new MACT standard would overlap with an existing standard which covered both RPCP and SCO. In such cases the new standard was introduced for RPCP and the existing standards was dedicated solely to SCO. For example, the Monitoring and Recordkeeping requirement III.B originally covered MSDS tracking for all operations. As the MACT required more detailed MSDS tracking, the MACT standard was included and the existing standard was dedicated to SCO.

SMLs which had previously been accepted by the source to remain below major source thresholds of VOC now also serve to avoid the WWWW threshold for sources emitting greater

than 100 tpy of HAPs (40 CFR 63.5805.(b).

Finally, monitoring and recordkeeping requirements that addressed both RPCP and SCO were not separated (as they were in sections I and II) as this would have required too many administrative amendments in order to do nothing more than separate conditions merely for organizational purposes.

## II. Source Description

### A. Process Description

Southwest Fiberglass LLC manufactures custom fiberglass storage tanks and ducts using reinforced plastic composites. The company uses several methods for applying the resins and gel-coats including hand lay-up, controlled and uncontrolled spraying, and filament winding. The primary pollutant of concern is styrene (both a VOC and a HAP found in the resins and the gel coats). Small amounts of Methyl Methacrylate (MMA) are emitted from one of the gel-coat products used. About 20% of the resin is applied by hand lay-up, about 55% by spraying, and about 25% by filament winding. At least half of the resin spraying is conducted with chopper guns using fluid impingement technology (FIT) nozzles. The remainder of the resin spraying is uncontrolled. None of the resins or gel coats consumed utilize a vapor suppressant. The primary clean-up solvent is Acetone. Southwest Fiberglass, Inc. is an existing major source of a single hazardous air pollutant (styrene), a major source of a combination of HAPs (styrene and MMA), a synthetic minor source of VOC, and a true minor source of all other criteria pollutants.

Affected Emission Source Classification: Class I stationary source subject to the provisions of 40 CFR 63 Subpart WWWW National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, the Pima County State Implementation Plan (Pima County SIP) and Title 17 of the Pima County Code, (PCC)

### B. Air Pollution Control Equipment

While *technically* an Air Pollution Control Device, the FIT nozzles were not addressed as such in this revision because PDEQ wanted to minimize reorganization of the permit.

## III. Regulatory History

### A. Testing & Inspections

Southwest Fiberglass (SWF) has had violations in the past. Inspections have occurred regularly and Southwest Fiberglass is currently in compliance with the PCC.

### B. Excess Emissions

During an inspection in 2001 it was discovered that SWF had possible excess emissions when they exceeded the allowable styrene content in one of their resins. The resin product's MSDS was found to have a styrene content by weight of 40-60% verses the 50% maximum allowed in the permit. (When a product is given a range, the higher limit is taken as the value of product

unless the Permittee can prove otherwise.)

## IV. Emissions Estimates

The following emissions estimates have been carried over unchanged from the previous permitting cycle and are based on that PTE. They were not altered and a new PTE was not calculated, as the revision included no modifications to the source or processes, only the inclusion of new applicable requirements. Furthermore, the emission factors used in the previous PTE were more conservative than those provided in the MACT.

| Pollutant | Pounds per Hour | Tons Per Year |
|---|---|---|
| Volatile Organic Compounds (VOC) | 19.6 | 86.0 |
| Total Hazardous Air Pollutants (HAPS) | 19.6 | 86.0 |

## V. Applicable Requirements

**Federally Enforceable Regulations:**

*Title 40 of the Code of Federal Regulations Part 63:*

| | |
|---|---|
| Subpart WWWW | National Emission Standards for Hazardous Pollutants: Reinforced Plastics Composites Production |

*State Implementation Plan, Pima County:*

| | |
|---|---|
| Rule 321 | Emissions-Discharge: Opacity Limiting Standards and Applicability |
| Rule 343 | Visibility Limiting Standard |
| Rule 344 | Odor limiting Standard |

**Non-Federally Enforceable Regulations:**

*Pima County Code (PCC) Title 17, Chapter 17.16:*

| | |
|---|---|
| 17.16.030 | Odor Limiting Standards |
| 17.16.040 | Standards and Applicability (Visible Emissions). |
| 17.16.050 | Visibility Limiting Standards |
| 17.16.400 | Organic Solvents and Other Organic Materials |
| 17.16.430 | Unclassified Sources |
| 17.20.010 | Source Sampling, Monitoring and Testing |
| 17.28.065 | Excess Emissions |

## VI. Permit Contents

Each standard will be addressed relative to the corresponding standard in the previous permit. Where applicable, the citation of the related standard is included [in brackets].

### A. Applicability

This is a Class I Stationary Source for a single HAP (styrene) and a combination of HAPs

(chiefly styrene and Methyl Mecthacrylate); a synthetic minor source of VOC and a true minor of all other pollutants. The two processes which are specifically covered by the permit are Reinforced Plastic Composites Production and Surface Coating Operations.

**B. Emission Limits/ Standards:**

II.A Reinforced Plastic Composites Production

II.A.1 – This resin and gel coat material use limitation has been carried over unchanged [II.A].

II.A.2 – This resin application limitation has been carried over unchanged; the note was converted to a footnote to keep the table on a single page [II.B].

II.A.3 – The styrene content limit has been amended to include the MACT limitations for HAP content [II.C]

II.A.4 – The Gel coat HAPs limit has been amended to include the MACT limitations for HAP content [II.D].

II.A.5 – Work Practice Standards

II.A.5.a – The cleaning solvent requirement has been amended to include the MACT limitations and exclusions [II.E].

II.A.5.b – The VOC/HAP storage requirement has been amended to include the MACT limitations and exclusions [II.F].

II.A.5.c – The VOC/HAP mixer cover requirement has been amended to include the MACT limitations and exclusions [II.G].

II.A.6 – This SML has been added to exempt the Permittee from the requirements of the MACT pertaining to operations not currently being conducted.

II.B Surface Coating Operations

II.B.1 – The paint use and VOC/HAP limitations have been carried over unchanged [II.L & M].

II.B.2 – The overspray limitation has been carried over unchanged [II.K].

II.B.3 – VOC Limitation. Transport and storage of VOC containing liquids.

II.B.4 – The architectural coating standards have been carried over unchanged [II.N].

II.C All Operations

II.C.1 – The Odor Limiting Standard has been carried over unchanged [II.H].

II.C.2 – The Opacity Standard has been amended to reflect the April 2005 update to the Pima County Code [II.I]

II.C.3-5 – The visible emissions standards have been carried over unchanged [II.J, O, & P].

**C. Monitoring and Recordkeeping Requirements:**

III.A Reinforced Plastic Composites Production

III.A.1 – 40 CFR 63.5797 [MSDS requirement] has been included into the permit in addition to duplicating the existing MSDS requirement. This is a **recordkeeping** requirement [III.A].

III.A.2 – 40 CFR 63.5915 [Records of reporting] has been included into the permit for RPCP operations. This is a **recordkeeping** requirement.

III.A.3 – 40 CFR 63.5920 [Format of records] has been included into the permit for RPCP operations. This is a **recordkeeping** requirement.

III.B Surface Coating Operations

III.B.1 & 2 – The MSDS requirements from the previous permit have been applied directly to SCO. This is a **recordkeeping** requirement [III.A.1 & 2].

III.C All Operations

III.C.1 – The material use **monitoring and recordkeeping** requirements have been carried over from the previous permit, however, the language has been slightly altered for clarity's sake (and so that the source would clearly have data for 12-month periods to confirm compliance with the use limitations in II.A.2 and II.B.1.b) [III.B].

III.C.2 – The emissions calculations (**monitoring and recordkeeping** requirements) have been carried over from the previous permit, however the language has been slightly altered so that the Permittee would clearly have emissions data for individual months and 12-month periods [III.C].

III.C.3 – The monthly inspection requirements have been carried over from the previous permit. This is a **monitoring and recordkeeping** requirement [III.D].

**D. Reporting Requirements:**

IV.A Reinforced Plastic Composites Productiton

IV.A.1 – 40 CFR 63.5860 (Initial Compliance Report) has been included for RPCP operations.

IV.A.2 – 40 CFR 63.5905 (Notification of Compliance Status) has been included for RPCP operations.

IV.B. – Excess Emissions Reporting has been amended to include MACT requirements [IV.A].

IV.C. – Semiannual Summary Reports of Required Monitoring has been amended for clarification of compliance in the reports [IV.B].

IV.D. – Compliance Certification Reporting has been amended to include the various MACT requirements [IV.C].

IV.E – Emissions Inventory Reporting has been carried over unchanged from the previous permit. [IV.D]

**E. Testing Requirements:**

All testing requirements have been carried over unchanged [V.A & B].

**F. Miscellaneous Comments:**

## VII. Previous Permit Conditions

Conditions that were previously cited as Preconstruction Requirements are now cited as 220 limits as they clearly meet the requirements to be such.